A dialog system includes processing units for automatic speech recognition, natural language understanding, and for defining system outputs in dependence on information derived from user inputs. The dialog system further includes processing units for generating acoustic and/or visual system outputs and for deriving user models. The user models contain details about the style of speech of user inputs and/or details about interactions in dialogs between users and the dialog system. In addition, adaptation of contents and/or form of system outputs is provided in dependence on the user models.